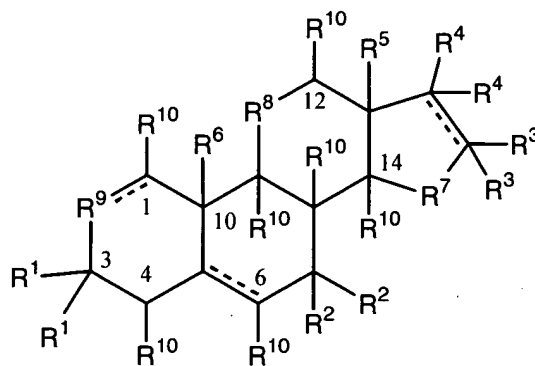


# AMENDMENTS TO THE CLAIMS

This listing of claims replaces any prior version of the claims in the application.

5 Claim 1 (currently amended): A method to treat a blood cell deficiency in a subject in need thereof comprising administering to the subject, or delivering to the subject's tissues, an effective amount of a compound of formula 1



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wherein, the dotted lines are optional double bonds and hydrogen at the 5-  
10 position, if present, is in the  $\alpha$ -configuration, each  $R^1$ ,  $R^2$ ,  $R^3$ ,  $R^4$ ,  $R^5$ ,  $R^6$  and  $R^{10}$  independently are -H, OH, -OR<sup>PR</sup>, -SR<sup>PR</sup>, -N(R<sup>PR</sup>)<sub>2</sub>, -O-Si-(R<sup>13</sup>)<sub>3</sub>, -CHO, -CHS, -CH=NH, -CN, -SCN, -NO<sub>2</sub>, -OSO<sub>3</sub>H, -OPO<sub>3</sub>H, an ester, a thioester, a thionoester, a phosphoester, a phosphothioester, a phosphonoester, a phosphiniester, a sulfite ester, a sulfate ester, an amide, an amino acid, a peptide, an ether, a  
15 thioether, an acyl group, a thioacyl group, a carbonate, a carbamate, a halogen, an optionally substituted alkyl group, an optionally substituted alkenyl group, an optionally substituted alkynyl group, an optionally substituted aryl moiety, an optionally substituted heteroaryl moiety, an optionally substituted heterocycle, an optionally substituted monosaccharide, an optionally substituted oligosaccharide,  
20 ~~a nucleoside, a nucleotide, an oligonucleotide, a biocompatible polymer, or,~~  
~~one or more of both  $R^1$ ,  $R^2$ ,  $R^3$  or  $R^4$  together comprise an independently selected spiro ring, or~~

one more of  $R^2$ ,  $R^3$  and  $R^{10}$  independently are  $=O$ ,  $=S$ ,  $=NOH$  or  $=CH_2=N-OH$ ,  $=CH_2$ , or a spiro ring and the hydrogen atom or the second variable group that is bonded to the same carbon atom is absent; ~~absent, or,~~

~~one or more of two adjacent  $R^4$ ,  $R^6$  and  $R^{10}$  comprise an independently~~  
5 ~~selected an acetal, a thioacetal, ketal or thioketal;~~

$R^7$  is  $-C(R^{10})_2$ ,  $-C(R^{10})_2-C(R^{10})_2$ ,  $-C(R^{10})_2-C(R^{10})_2-C(R^{10})_2$ ,  $-C(R^{10})_2-O-C(R^{10})_2$ ,  $-C(R^{10})_2-S-C(R^{10})_2$ ,  $-C(R^{10})_2-NR^{PR}-C(R^{10})_2$ ,  $-O-$ ,  $-O-C(R^{10})_2$ ,  $-S-$ ,  $-S-C(R^{10})_2$ ,  $-NR^{PR}$  or  $-NR^{PR}-C(R^{10})_2$ ;

$R^8$  and  $R^9$  independently are  $-C(R^{10})_2$ ,  $-C(R^{10})_2-C(R^{10})_2$ ,  $-O-$ ,  $-O-C(R^{10})_2$ ,  
10  $-S-$ ,  $-S-C(R^{10})_2$ ,  $-NR^{PR}$  or  $-NR^{PR}-C(R^{10})_2$ , wherein  $R^{10}$  at  $R^8$  and  $R^9$  independently are  $-H$ , halogen or optionally substituted alkyl or one or both of  $R^8$  or  $R^9$  independently are absent, leaving a 5-membered ring;

$R^{13}$  independently is  $C_{1-6}$  alkyl;

$R^{PR}$  independently is  $-H$  or a protecting group;

15 provided that one  $R^4$  is  $-N(R^{PR})_2$ ,  $-NHR^{PR}$  or both  $R^4$  together are  $=NOH$  or  $=NOC(O)CH_3$ .

Claim 2 (previously presented): The method of claim 1 wherein one  $R^{10}$  at the 1, 4, 6, 8, 9, 12 or 14 position is not  $-H$  and the remaining  $R^{10}$  are  $-H$ .

20

Claim 3 (original): The method of claim 2 wherein the one or two  $R^{10}$  at the 1, 4, 6, 8, 9, 12 and 14 positions are independently selected from  $-F$ ,  $-Cl$ ,  $-Br$ ,  $-I$ ,  $-OH$ ,  $=O$ ,  $-CH_3$ ,  $-C_2H_5$ , an ether optionally selected from  $-OCH_3$  and  $-OC_2H_5$ , and an ester optionally selected from  $-O-C(O)-CH_3$  and  $-O-C(O)-C_2H_5$ .

25

Claim 4 (original): The method of claim 3 wherein the one or two  $R^{10}$  at the 1, 4, 6, 8, 9, 12 and 14 positions are independently selected from  $-F$  and  $-OH$ .

Claim 5 (canceled)

30

Claim 6 (original): The method of claim 1 wherein the subject has thrombocytopenia or neutropenia.

5 Claim 7 (original): The method of claim 1 wherein the subject's circulating platelets, red cells, mature myelomonocytic cells, or their precursor cells, in circulation or in tissue is detectably increased.

10 Claim 8 (original): The method of claim 7 wherein the subject's circulating platelets are detectably increased.

Claim 9 (original): The method of claim 7 wherein the subject's circulating myelomonocytic cells are detectably increased.

15 Claim 10 (original): The method of claim 7 wherein the circulating myelomonocytic cells are neutrophils.

Claim 11 (original): The method of claim 7 wherein the myelomonocytic cells are basophils, neutrophils or eosinophils.

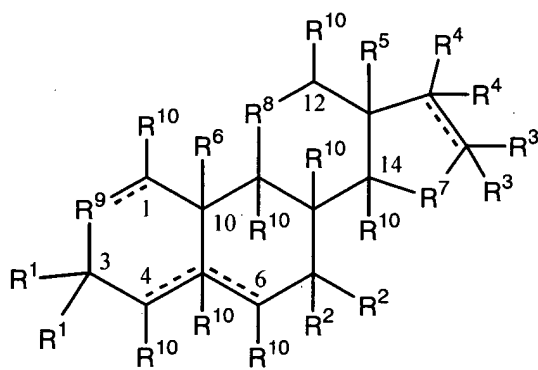
20 Claim 12 (original): The method of claim 7 wherein the subject's circulating red cells are detectably increased.

25 Claim 13 (original): The method of claim 7 wherein the subject is has renal failure.

30 Claim 14 (original): The method of claim 7 further comprising the steps of obtaining blood from the subject before administration of the formula 1 compound and measuring the subject's white or red cell counts and optionally, on one, two, three or more occasions, measuring the subject's circulating white cell or red cell counts after administration of the formula 1 compound.

Claims 15-45 (canceled)

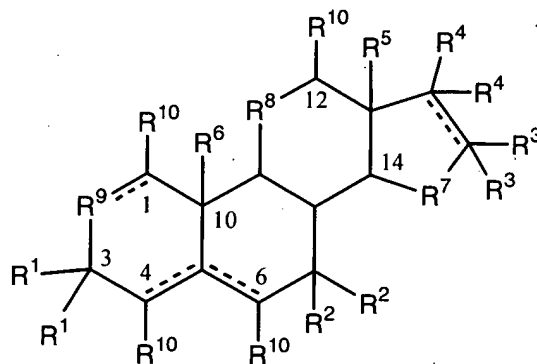
Claim 46 (currently amended): The method of claim 1 wherein the  
5 compound of formula 1 has the structure



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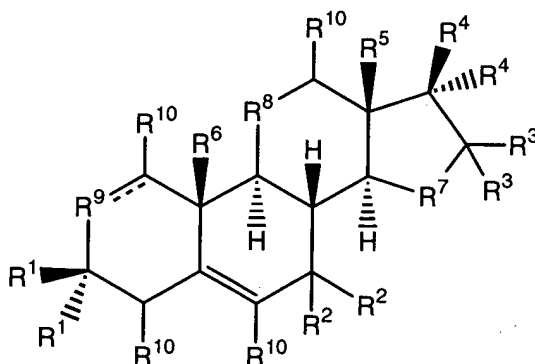
wherein, each  $R^1$ ,  $R^2$ ,  $R^3$ ,  $R^5$ ,  $R^6$  and  $R^{10}$  independently are -H, OH, -  
OR<sup>PR</sup>, -SR<sup>PR</sup>, -N(R<sup>PR</sup>)<sub>2</sub>, -O-Si-(R<sup>13</sup>)<sub>3</sub>, -CHO, -CHS, -CH=NH, -CN, -SCN, -NO<sub>2</sub>, -  
OSO<sub>3</sub>H, -OPO<sub>3</sub>H, an ester, a thioester, a thionoester, a phosphoester, a  
10 phosphothioester, a phosphonoester, a phosphiniester, a sulfite ester, a sulfate  
ester, an amide, an amino acid, a peptide, an ether, a thioether, an acyl group, a  
thioacyl group, a carbonate, a carbamate, a halogen, optionally substituted alkyl,  
optionally substituted alkenyl, optionally substituted alkynyl, optionally substituted  
aryl, optionally substituted heteroaryl, optionally substituted heterocycle,  
15 optionally substituted monosaccharide, optionally substituted oligosaccharide, a  
nucleoside, a nucleotide, an oligonucleotide, a biocompatible polymer, or,  
~~one or more of both  $R^1$ ,  $R^2$  or  $R^3$  together comprise an independently  
selected spiro ring, or~~  
one more of  $R^2$ ,  $R^3$  and  $R^{10}$  are =O, =S, =N-OH, =CH<sub>2</sub>, and  
20 one  $R^4$  is -NH<sub>2</sub>, -NHR<sup>PR</sup>, -N(R<sup>PR</sup>)<sub>2</sub>, an amide, an amino acid, a peptide,  
and the other  $R^4$  is -H, optionally substituted alkyl, optionally substituted alkenyl,  
optionally substituted alkynyl, optionally substituted aryl, optionally substituted  
heteroaryl or optionally substituted heterocycle, or,  
both  $R^4$  together are =NOH or =NOC(O)CH<sub>3</sub>.

Claim 47 (previously presented): The method of claim 46 wherein the blood cell deficiency is neutropenia or thrombocytopenia and wherein the compound of formula 1 has the structure



5

Claim 48 (previously presented): The method of claim 47 wherein the compound of formula 1 has the structure



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Claim 49 (currently amended): The method of claim 48 wherein  
one R<sup>1</sup> in the  $\beta$ -configuration is -OH, -SH, -Br, -I, an ester, a carbonate, -  
O-monosaccharide, -O-disaccharide;

the other R<sup>1</sup> in the  $\alpha$ -configuration is -H, optionally substituted alkyl,  
optionally substituted alkenyl or optionally substituted alkynyl;

R<sup>2</sup> independently are -H, -OH, =O, optionally substituted alkyl, optionally  
substituted alkenyl or optionally substituted alkynyl;

R<sup>3</sup> independently are -H, -OH, =O, halogen, optionally substituted alkyl, optionally substituted alkenyl or optionally substituted alkynyl;

R<sup>4</sup> in the  $\alpha$ -configuration is -H, -CN, -SCN, optionally substituted alkyl, optionally substituted alkenyl, optionally substituted alkynyl or an ether;

5 R<sup>4</sup> in the β-configuration is -NH<sub>2</sub>, -NHR<sup>PR</sup> or -N(R<sup>PR</sup>)<sub>2</sub>;

$R^5$  is  $-CH_3$ ; and

~~R<sup>6</sup> is -H or -CH<sub>3</sub>.~~ R<sup>6</sup> is -H or -CH<sub>3</sub>.

$R^7$  is  $-CH_2-$ ;

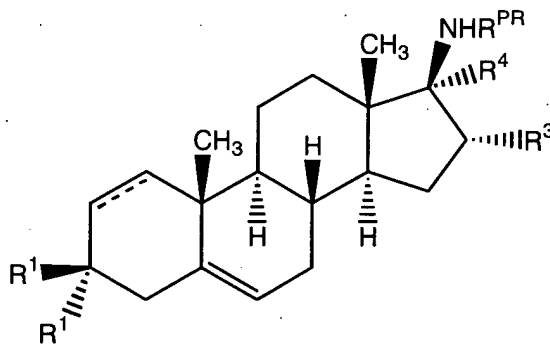
**R<sup>8</sup> is -CH<sub>2</sub>- or -CHR<sup>10</sup>- wherein R<sup>10</sup> is -OH, -SH, optionally substituted**

10 alkyl, optionally substituted alkenyl or optionally substituted alkynyl;

R<sup>9</sup> is -CH<sub>2</sub>-, -O- or -CHR<sup>10</sup>- wherein R<sup>10</sup> is -OH, =O, -SH, =S, optionally substituted alkyl, optionally substituted alkenyl or optionally substituted alkynyl;

**R<sup>10</sup> at the 1, 4, 6, 8, 9, 12 and 14 positions are -H.**

15            Claim 50 (previously presented): The method of claim 49 wherein the  
compound has the structure

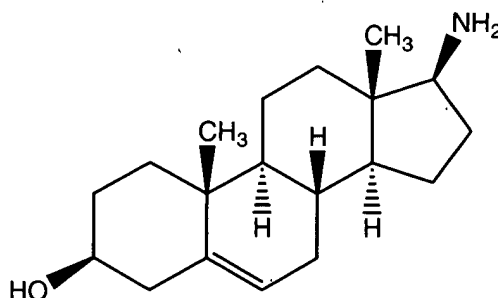


wherein  $R^{PR}$  is -H, an amide or a carbamate.

20            Claim 51 (previously presented): The method of claim 50 wherein the  
subject is a mammal.

Claim 52 (previously presented): The method of claim 51 wherein the blood cell deficiency is neutropenia and the mammal has neutropenia, or is subject to developing neutropenia.

- 5      Claim 53 (previously presented): The method of claim 52 wherein the compound has the structure

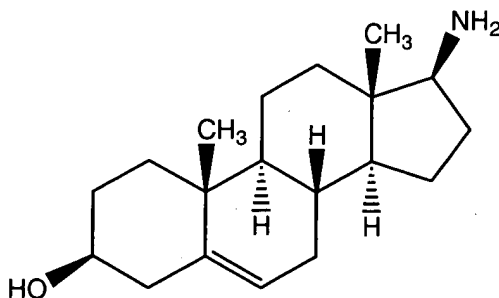


- 10      Claim 54 (previously presented): The method of claim 53 wherein the neutropenia is associated with a chemotherapy or radiation exposure.

Claim 55 (previously presented): The method of claim 51 wherein the blood cell deficiency is thrombocytopenia and the mammal has thrombocytopenia, or is subject to developing thrombocytopenia.

15

- Claim 56 (previously presented): The method of claim 55 wherein the compound has the structure



Claim 57 (previously presented): The method of claim 56 wherein the thrombocytopenia is associated with a chemotherapy or radiation exposure.

5      Claim 58 (new): The method of claim 57 wherein the mammal is a human or a non-human primate.

Claim 59 (new): The method of claim 56 wherein the thrombocytopenia is associated with radiation exposure.

10      Claim 60 (new): The method of claim 54 wherein the mammal is a human or a non-human primate.

Claim 61 (new): The method of claim 60 wherein the neutropenia is associated with radiation exposure.

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